

Latina/o Students in K-12 Schools: A Synthesis of Empirical Research on Factors Influencing
Academic Achievement

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Abstract

The purpose of this systematic review is to provide a comprehensive synthesis and analysis of the empirical evidence to date on the factors related to Latina/o student academic achievement in the country's increasingly Latina/o K-12 schools. Factors found to be related to academic achievement outcomes (e.g., grades, test scores, high school completion, college enrollment) for Latina/o students include a combination of (1) demographic variables, (2) sociocultural variables, (3) academic experiences, (4) psychological variables, and (5) school/institutional variables. In addition, this research synthesis identified several methodological trends in the research on Latina/o student success.

Keywords: Latina/o students, K-12, academic achievement, literature review

Latina/o Students in K-12 Schools: A Synthesis of Empirical Research on Factors Influencing Academic Achievement

Of the over 55 million Latinas/os living in the United States (Stepler & Brown, 2016), one third are younger than 18 years old, making them the youngest major racial/ethnic group in the nation (Patten, 2016). Latina/o students comprise the largest minority group in elementary and secondary schools in 23 states, including over half of all students in California, Texas, and New Mexico and around 40% of students in Arizona and Nevada (National Center for Education Statistics, 2015). In addition, Latina/o student enrollment in public K-12 schools is projected to increase 32% by the year 2023 (Hussar & Bailey, 2016). However, Latina/o students have the highest rates of school dropout (Davis & Bauman, 2011) and the lowest rates of high school graduation (Snyder, de Brey, & Dillow, 2016), enrollment in 4-year colleges and universities (Ortiz, Valerio, & Lopez, 2012), and bachelor's degree completion (Ryan & Bauman, 2016) among their White, Black, and Asian peers.

In response to the Latina/o educational crisis (Gándara & Contreras, 2009; Ocasio, 2014), an increasing body of research has focused on determining which factors are associated with the academic achievement of Latina/o students. Within this work are literature reviews and essays centered on Latina/o students, such as the state of research regarding Latina/o students' experiences in K-16 education (R. Padilla, 2007), Latina/o academic attainment (Ayala, 2012), Latina/o parents' involvement with mathematics education (C. O. Lopez & Donovan, 2009), and how college outreach programs impact Latina/o high school students (Loza, 2003); however, to date, there has been no comprehensive literature review conducted that synthesizes the scholarship specific to Latina/o academic achievement outcomes in K-12 schools. As educators across the country become the instructional leaders of increasingly Latina/o student bodies, it is

imperative that they understand which factors are most related to Latina/o student academic achievement. In addition, as Pounder and Johnson (2009) state, “. . .the need for and potential contributions of rigorous and comprehensive literature reviews that can inform and anchor future knowledge development within the field has increased” (p. 3). Therefore, the current review seeks to provide a comprehensive synthesis and analysis of the empirical evidence to date on Latina/o academic achievement in elementary and secondary schools.

Although there are many ways to conceptualize academic achievement, this review focuses on the outcomes studied most often in the reviewed scholarship. The most prevalent achievement outcomes examined by researchers were grades, test scores, high school completion, and college enrollment. The decision to review research focusing strictly on traditional academic achievement outcomes is not meant to undervalue research investigating the structural, societal, cultural, and economic conditions influencing Latina/o students' access to equality in the American educational system. For example, research has been conducted on Latina/o students' lack of access to high quality, rigorous curriculum (e.g., Solórzano & Ornelas, 2004), feelings of marginalization and their effects on Latina/o students' schooling experiences (Meador, 2005; Quiroz, 2001), teachers' attitudes and behavior toward students with whom they perceive themselves to have cultural differences (e.g., Fergus, 2009; Tan, 2001), and the lack of cultural responsiveness to Latina/o students in schools (e.g., Marx, 2008; Tan, 2002). Although these are all important areas of research and it is recognized that they are intertwined with Latina/o academic achievement, such investigations fall outside the scope of the current study. By identifying factors that facilitate or inhibit academic achievement for Latina/o students, this study purposes to offer insight into how to increase educational success for this traditionally underserved group. While a substantial amount of research has been conducted in this area, the

volume of work, as well as its scattering in journals across academic disciplines, makes it difficult for educators to access all of the relevant information on the subject. This review, therefore, is an attempt to provide a comprehensive synthesis of the scholarship to date in order to encourage dialogue, as well as changes in practice, among educators working with Latina/o students. As such, the following research question guides this study: What factors are related to Latina/o student academic achievement in K-12 schools? The subsequent sections describe the methodology used to steer the review and then discuss the findings from the literature.

Method

The purpose of a literature review is to critically evaluate published scholarly material in order to consider the progress of research toward clarifying a problem; to inform an audience of the state of research; to identify relationships, contradictions, and gaps in the literature; and to recommend next steps in solving the problem (American Psychological Association, 2010). Consistent with the research question guiding the review, nine electronic databases were searched for applicable research: (1) Academic Search Complete, (2) Education Full Text, (3) Education Research Complete, (4) ERIC (via EBSCO), (5) Chicano Database, (6) Social Sciences Full Text, (7) SocINDEX, (8) PsycARTICLES, and (9) PsycINFO. Combinations of key search terms including “Hispanic,” “Latina,” “Latino,” “students,” “academic achievement,” “academic outcomes,” “academic success,” “educational outcomes,” and “educational attainment” were used to search these databases. In addition, individual journals thought to contain pertinent research were manually searched, as well as the reference pages of appropriate articles that were already located. Although all scholarship conducted prior to October 2016 was considered for the current study, relevant studies generally fell into the last 15 years.

After locating all articles thought to be germane to this review, each article was read and a database was created to sort and code the following characteristics for the identified studies: (1) purpose and/or research questions, (2) theory or conceptual models, (3) research design, (4) survey scales (if used), (5) school level, (6) outcome(s), and (7) results. Empirical research that used quantitative or qualitative methods to understand and/or test relationships between one or more variables and academic achievement outcomes among Latina/o students in elementary or secondary schools was selected for inclusion in this study. Studies investigating more than one minority group were included if the results were disaggregated by racial/ethnic group and the findings for Latina/o students were reported separately from other groups. Investigations that did not explicitly address academic achievement outcomes (e.g., aspirations, engagement, sense of belonging), studies that described trends in data, and research that focused on preschool or college student samples were excluded from review.

The complete search produced 170 articles, which were then reduced to 134 studies after the initial analysis of suitability. A critical evaluation of the research found to meet all of the inclusion/exclusion criteria identified several factors found to be related to one or more academic achievement outcomes for Latina/o students. These factors were then organized into five themes: (1) demographic variables, (2) sociocultural variables, (3) academic experiences, (4) psychological variables, and (5) school/institutional variables.

Results

The most prevalent academic achievement outcomes examined in the 134 studies found to meet all of the inclusion and exclusion criteria were grades or grade point average (GPA), test scores (with mathematics test scores being studied more often than English Language Arts test scores), high school completion, and college enrollment, while less attention was given to

attendance, disciplinary issues, school readiness, literacy, and general “academic success.”

Although 37% of the reviewed research was located in education journals, the majority of studies were found in publications outside the field of education (63%). These studies were found mainly in psychology (40%) and sociology (9%) journals, with the remaining 15% coming from journals representing a variety of fields (i.e., social work, social science, demography, ethnic studies, culture, economics, child welfare, political science, and multidisciplinary studies). The first studies appeared in the early 1990s (Reyes, 1993; Reyes & Jason, 1991), though the research on Latina/o academic achievement outcomes did not become more prevalent until the early 2000s. From 2009 to 2015, published studies have been in the low double digits (between 10 and 18 articles per year) each consecutive year except for one (2010).

The large majority of reviewed studies utilized quantitative methods (86%), while only seven studies (5%) used exclusively qualitative methods and approximately 9% used mixed methodologies. The quantitative studies used almost wholly non-experimental designs and relied predominantly on survey methods. Roughly one third of these studies were produced from the analyses of at least one of four national longitudinal data sets: (1) the National Education Longitudinal Study (NELS), (2) the Educational Longitudinal Study (ELS), (3) the Early Childhood Longitudinal Study–Kindergarten (ECLS-K), and (4) the National Longitudinal Study of Adolescent Health (Add Health). The most prominent methods of statistical analyses used in the quantitative studies were various regression models, hierarchical linear modeling (HLM), structural equation modeling (SEM), and descriptive statistics. Interviews and focus groups made up the dominant data collection in the qualitative studies, two of which were conducted using an ethnographic approach while phenomenological and grounded theory approaches were used in

one study each. The remainder of the qualitative studies failed to specify a research paradigm. All of the qualitative studies were conducted with high school samples.

Of the analyzed studies, 62% were conducted using samples of exclusively secondary students, with the majority of those set at the high school level (50% compared with approximately 12% at the junior high or middle school level). Twenty-two of the studies (17%) focused on elementary school students, while 24 studies (18%) used samples from across elementary and secondary grades and four studies (3%) did not specify a grade level. Although some of the published articles outlined a theoretical or conceptual framework to guide the study (e.g., Bandura's academic self-efficacy theory; Bronfenbrenner's ecological culture theory; Moll's Funds of Knowledge; Hossler and Stage's college choice theory; Ogbu's oppositional culture theory), the majority did not, and no theory was cited in more than one of the reviewed studies.

Factors Associated With Latina/o Academic Achievement

The literature on the factors associated with Latina/o academic achievement includes studies focusing on five areas: (1) demographic variables, (2) sociocultural variables, (3) academic experiences, (4) psychological variables, and (5) school/institutional variables. Each of these areas will be discussed in the following sections.

Demographic variables. Empirical findings indicate that several demographic variables influence Latina/o academic achievement, including gender, ethnicity, generational status, native language, and socioeconomic status (SES). In regard to the relationship between gender and academic achievement, with few exceptions related to mathematics test scores (e.g., Hong & You, 2012; Mosqueda & Maldonado, 2013), being female is overwhelmingly associated with the academic success outcomes of school readiness (Furlong & Quirk, 2011), grades (e.g., Cupito,

Stein, & Gonzalez, 2015), test scores (Lapayese, Huchting, & Grimalt, 2014), high school completion (Zarate & Pineda, 2014), and college enrollment (Weiher, Hughes, Kaplan, & Howard, 2006; Zarate & Gallimore, 2005).

The Latina/o ethnicities researched most often in the literature concentrated on students of Mexican, Puerto Rican, and Cuban backgrounds, though students from other Latin American backgrounds were also included in studies on occasion (e.g., Tillman, Cuo, & Harris, 2006). Being of Mexican origin proved to be a risk factor for students in most research studies, with those students receiving lower grades and test scores and having lower rates of high school completion and college enrollment than students of other nationalities (e.g., Claster & Blair, 2013; Crosnoe, 2005).

Research investigating the relationship between generational status and the achievement of Latina/o students has shown mixed findings. With the exception of one study (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009), Latina/o immigrant students' grades have been shown to be higher than those of U.S.-born Latina/o students (Crosnoe, 2005; A. M. Padilla & Gonzalez, 2001). However, other studies have found that teachers rate the academic performance of U.S.-born Latina/o students higher than their peers born outside the United States (e.g., Fite, Rubens, & Cooley, 2014; Supple, Chazatian, Frabutt, Plunkett, & Sands, 2006). High school completion (e.g., Claster & Blair, 2013; Zarate & Pineda, 2014) and college enrollment (Riegle-Crumb, 2010; Zarate & Gallimore, 2005) have also been shown to be lower for immigrant students. For instance, using hierarchical generalized linear models in a study of over 26,000 Latina/o students in a large urban school district, Zarate and Pineda (2014) found that for U.S.-born Latinas/os, the odds of high school completion were 22% greater than that of immigrant Latina/o students.

Similar to the research on generational status, studies examining native language also show mixed results. For example, in two nationally representative longitudinal studies, being proficient in Spanish and/or speaking Spanish at home has been shown to be negatively related to mathematics test scores at the elementary level (Hong & You, 2012), though it has been positively associated with English Language Arts (ELA) test scores at the secondary level (Guglielmi, 2008). These differences may be related to the subject matter of the tests or the school level of the students taking the tests. Moreover, speaking Spanish at home during elementary school has been shown to positively affect high school completion (Zarate & Pineda, 2014) and being bilingual in both Spanish and English is also positively related to achievement (Supple et al., 2006). However, speaking English in the home has been shown to increase college enrollment (e.g., Weiher et al., 2006), including the odds of enrolling in a 4-year college rather than in a 2-year postsecondary school (Taggart & Crisp, 2011).

Researchers generally concur that SES impacts the majority of achievement outcomes, including test scores (e.g., Bécares & Priest, 2015), grades (e.g., Azmitia, Cooper, & Brown, 2009), high school completion (Claster & Blair, 2013; Zarate & Pineda, 2014), college enrollment (Song & Elliott, 2012), and student discipline (e.g., H. Park, Lin, Liu, & Tabb, 2015). SES is measured in various ways in the literature, including family income, qualifying for Free and Reduced Lunch (FRL), parental home ownership, receiving in-kind welfare benefits, and college savings. All but one of the reviewed studies (F. López, 2011) on the association between SES and test scores were conducted with large, nationally representative data sets (e.g., ECLS-K, ELS: 2002; NELS:88) and concluded that higher SES correlated to higher test scores in core subjects (e.g., Bécares & Priest, 2015; Hong & You, 2012; Lleras & Rangel, 2009; Mosqueda & Maldonado, 2013). Across studies, published research also indicated that higher SES is

associated with higher grades (Azmitia et al., 2009; Claster & Blair, 2013; Crosnoe, 2005; Maynard, Kjellstrand, & Thompson, 2014).

In addition, age was related to Latina/o student success only at the elementary school level, where younger students had better grades (H. Park et al., 2015) but lower test scores (Furlong & Quirk, 2011; Quirk, Nylund-Gibson, & Furlong, 2013), while older students had more discipline problems (H. Park et al., 2015).

Sociocultural variables. Research findings to date have shown that academic success among Latina/o students is related to home and family support, student peer groups, parental education levels, extracurricular participation, English proficiency, neighborhood variables, and cultural variables. Home and family support is the sociocultural variable which has been included most often in research on Latina/o student academic achievement and provides strong evidence that the support of Latina/o parents is crucial to the academic achievement of their children, as parental involvement, interest, encouragement, and monitoring are all positively related to student test scores (e.g., Chun & Dickson, 2011; Mena, 2011). In several quantitative studies examining hundreds of students in various schools and districts in the western United States, higher levels of parental support in the forms of academic encouragement, parental monitoring, and supportive parent relationships were associated with higher grades (e.g., LeCroy & Krysik, 2008; Santiago, Gudiño, Baweja, & Nadeem, 2014). Moreover, high parent expectations for their children's success are associated with students' test scores and college enrollment (e.g., Kalogrides, 2009). For instance, in longitudinal studies, Latina/o parents' college expectations for their children were found to be predictive of their 4-year college enrollment (Song & Elliott, 2012; Zarate & Gallimore, 2005). The support of siblings is also related to student grades (Azmitia et al., 2009) and siblings' college experience is associated with

Latina/o college enrollment (Weiher et al., 2006). In addition, parent–school involvement is positively related to grades and high school completion (e.g., Jabaghourian, Sorkhabi, Quach, & Strage, 2014).

Similar to the support students receive from their families, support from their peer groups also has been shown to influence Latina/o academic achievement. While having a pro-academic peer group is associated with better grades (e.g., LeCroy & Krysik, 2008), higher rates of high school completion (Lagerwey, Phillips, & Fuller, 2003) and college enrollment (e.g., Riegle-Crumb, 2010), and lower incidences of disciplinary action against students (Oyserman, Brickman, Bybee, & Celious, 2006), findings on the effects of socializing in racially and ethnically homo- or heterogeneous peer groups are not as clear. For example, though socializing with other Latina/o students has been shown to negatively correspond with test scores (e.g., Kalogrides, 2009), research examining grades and high school completion show mixed results. Concerning grades, Goza and Ryabov (2009) found that when Latina/o student networks were more homogeneous, students were more likely to have higher grades and to graduate from high school. However, Guzmán, Santiago-Rivera, and Haase (2005) found that whether Latina/o students were inclined to socialize with other ethnic groups was associated with higher grades. These differences in findings may be due to sample size or geography, as the former study utilized a nationally representative longitudinal data set of nearly 14,000 Latina/o students while the latter analyzed just over 200 students in one state.

Parental education levels, including immigrant parents' pre-migration education (Pong & Landale, 2012), have also been found to influence test scores (e.g., Hannon, 2015), grades (e.g., Rios-Aguilar, 2010), college enrollment (Taggart & Crisp, 2011; Riegle-Crumb, 2010; Song & Elliott, 2012), and discipline issues (Prelow & Loukas, 2003) among Latina/o students. The

educational level of mothers is also specifically cited in the literature as contributing to Latina/o student academic outcomes (Claster & Blair, 2013; Prelow & Loukas, 2003).

Overarchingly, the literature has identified participation in extracurricular activities as having a positive effect on Latina/o student success in the form of test scores (J. A. Espinoza, Lunenburg, & Slate, 2013; Prelow & Loukas, 2003), grades (e.g., Crosnoe, 2005), high school completion (Flores-González, 2000; Lagerwey et al., 2003), college enrollment (e.g., Taggart & Crisp, 2011), attendance (Flores-González, 2000), and discipline (Flores-González, 2000; Prelow & Loukas, 2003).

Adding to the variables that have been found to have positive effects on Latina/o student achievement, English proficiency is related to student test scores (Barrett et al., 2012; Mosqueda & Maldonado, 2013), grades (Alfaro et al., 2009; Claster & Blair, 2013; Santiago et al., 2014), high school completion (Zarate & Pineda, 2014), and college enrollment (Zarate & Gallimore, 2005), while biliteracy achievement in Spanish and English was positively related to high school completion, college enrollment, and enrollment in bachelor's degree programs (Lutz, 2004).

Where Latina/o students live also affects their academic success outcomes. For example, the percentage of a city's Latina/o population (Mayer, 2004) and living in the western United States (Riegle-Crumb & Callahan, 2009) have both been associated with high school completion, though living in a disadvantaged neighborhood is negatively related to test scores and student discipline issues (Prelow & Loukas, 2003). Moreover, Fite et al.'s (2014) analysis of high school students in a large Midwestern city revealed that when levels of neighborhood violence were high, Latina/o students' academic performance was low.

Cultural variables have also been shown to be associated with Latina/o student achievement. For instance, Latina/o students who exhibit more mainstream cultural values have

been shown to have lower test scores (Santiago et al., 2014), though the generally accepted Latina/o cultural value of familism has been positively related to grades (Cupito et al., 2015) and school attendance (Esparza & Sánchez, 2008). In addition, cultural discontinuity between mainstream and Latina/o cultural values at home and at school has been found to be negatively associated with grades (Taggart, 2017).

Academic experiences. Numerous studies have examined the influence of academic experiences on Latina/o educational achievement. This body of research includes taking more rigorous courses, prior academic achievement, participating in school and/or community programs designed to improve student success, positive interactions with school faculty and staff, students' personal study behaviors, and student attendance as variables related to Latina/o academic achievement.

Scholarly literature regarding rigorous course-taking shows positive relationships between taking more and higher level mathematics courses (e.g., Taggart & Crisp, 2011; Mosqueda & Maldonado, 2013) as well as Advanced Placement (AP) and/or International Baccalaureate (IB) courses (e.g., Riegle-Crumb, 2010) as contributing to student test scores and college enrollment. Two studies using data from the ELS show this relationship well. Mosqueda and Maldonado (2013) used HLM to show that every additional higher level mathematics course taken by Latina/o high school students was associated with a three-point positive difference in 12th-grade mathematics IRT (item response theory)-scaled scores. In addition, Taggart and Crisp (2011) found that taking an additional mathematics course in high school increased the odds of enrolling in a 4-year college by a factor of 1.76 and that the odds of enrolling in a 4-year school were almost 5 times as large for those students who were enrolled in AP courses during high school.

In addition to course-taking rigor, students' achievement or ability in previous grades has been shown to positively impact test scores (e.g., Furlong & Quirk, 2011; Lleras & Rangel, 2009; E. M. Lopez, Gallimore, Garnier, & Reese, 2007; Valle, Diaz, Waxman, & Padrón, 2013), grades (Rios-Aguilar, 2010), high school completion (Claster & Blair, 2013; Lutz, 2004; Zarate & Pineda, 2014), and college enrollment (Griffin, 2002; Riegle-Crumb, 2010; Song & Elliott, 2012; Weiher et al., 2006; Zarate & Gallimore, 2005). For instance, Song and Elliott (2012) utilized hierarchical linear growth modeling with the ELS:2002 data set to show that for every one-unit increase in GPA, the odds of Latina/o students' college enrollment increased by 2.25 times. Similarly, Griffin (2002) studied students at 75 high schools in Florida and found that a one-unit increase in GPA increased Latina/o students' odds of staying in school by 136%. Moreover, prior schooling in Mexico and English as a Second Language (ESL) or bilingual instruction have been found to improve student grades (A. M. Padilla & Gonzalez, 2001). Furthermore, previous academic failures have been negatively associated with high school completion (Reyes, 1993; Zarate & Pineda, 2014).

Overall research findings to date indicate that participating in school and/or community programs designed to improve student success is related to improvement in school readiness (Yoshikawa, Gassman-Pines, Morris, Gennetian, & Godfrey, 2010), test scores (e.g., Borrero, 2011), grades (Maynard et al., 2014), high school completion (e.g., Gibson & Bejénez, 2002), and college enrollment (Weiher et al., 2006). Examples of such programs specifically cited in the literature include AVID and GEAR UP (e.g., Lozano, Watt, & Huerta, 2009), ESL (Claster & Blair, 2013) and bilingual education programs (e.g., Lindholm-Leary & Borsato, 2005), and other school-specific intervention programs that have been implemented by faculty at individual school sites (e.g., Johnson & Fargo, 2014; Reyes & Jason, 1991). School-specific interventions

included programs such as interpreting programs (Borrero, 2011) and teacher-led guidance and counseling classes (Reyes & Jason, 1991).

Apart from designated programs, Latina/o students' positive experiences with school faculty and staff have been shown to influence their achievement. Among these experiences are having caring teachers (e.g., Garrett, Antrop-González, & Vélez, 2010; Riconscente, 2014); receiving courage, guidance, and support from adults at school (e.g., Azmitia et al., 2009; Lagerwey et al., 2003; Rivas-Drake, 2011); interacting with school counselors regarding college (Weiher et al., 2006); and experiencing various types of specific teaching practices (e.g., F. López, 2011; Turner & Celedón-Pattichis, 2011; Valle et al., 2013) such as high-ability grouping (Lleras & Rangel, 2009), content explanations (Riconscente, 2014), and culturally responsive teaching (Chun & Dickson, 2011). Such interactions between Latina/o students and school faculty and staff have been associated with students' test scores, grades, high school completion, college enrollment, and discipline.

Next, students' study behaviors have been shown to impact their achievement (e.g., H. S. Park & Yau, 2014). In particular, the hours spent working on and completing homework has been positively related to grades, high school completion, and college enrollment (e.g., Riegle-Crumb, 2010). Current research also reveals that school attendance is a necessary component of Latina/o academic success. For instance, high attendance is positively related to high school completion (Reyes, 1993) and college enrollment (Weiher et al., 2006). However, transience has been shown to be negatively related to high school completion and test scores (e.g., Reyes, 1993).

Psychological variables. Prior research that has examined psychological variables which contribute to Latina/o academic achievement include studies on perceived discrimination and/or

racism, racial/ethnic identity, academic motivation and engagement, feelings of school satisfaction or belonging, and other psychological and emotional factors. First, discriminatory experiences have been shown to negatively influence Latina/o student achievement in regard to grades and college enrollment (e.g., Alfaro et al., 2009; Taggart & Crisp, 2011). In addition, experiencing stereotype threat, the idea that students' ability to perform academically is diminished by their anxiety over negative stereotypes of their own social group (e.g., being Latina/o; Steele, 2010; Steele & Aronson, 1995; Walton & Spencer, 2009), is negatively related to test scores (Rodríguez, 2014). However, feeling higher public regard for students' ethnicity is positively related to grades (Rivas-Drake, 2011).

Second, research on the influence of racial/ethnic identity on achievement (e.g., Garrett et al., 2010; Supple et al., 2006) has shown that having a strong ethnic identity is positively related to grades (e.g., Chang & Le, 2010) while having a bicultural identity is positively associated with test scores (Zarate, Bhimji, & Reese, 2005). For instance, among students of Mexican descent, Zarate et al. (2005) conducted a longitudinal study of 79 Spanish-speaking families in Los Angeles and found that students who identified with the labels of Mexican American, American, or Chicano significantly outperformed all other groups on reading and mathematics test scores.

Furthermore, there is agreement within the literature that high academic motivation as well as both academic and behavioral engagement in class are positively related to test scores and grades (e.g., Boutakidis, Rodríguez, Miller, & Barnett, 2014). Moreover, cognitive self-competence is positively correlated with grades (Alva & de Los Reyes, 1999) and self-efficacy is positively related to test scores, grades, and attendance (e.g., Chun & Dickson, 2011; Riconscente, 2014). As expected, having higher college aspirations and expectations are positively correlated with college enrollment (e.g., Taggart & Crisp, 2011; Song & Elliott, 2012).

In addition to research on discrimination, ethnic identity, and motivation, studies have detailed the positive effects of feelings of school belonging, school satisfaction, and school acculturation on Latina/o student achievement (e.g., Fite et al., 2014), including their grades (Maurizi, Ceballo, Epstein-Ngo, & Cortina, 2013), attendance (Sánchez, Colón, & Esparza, 2005), and high school completion (e.g., Reyes, 1993). Other psychological and emotional factors that contribute negatively to Latina/o student achievement, however, include externalizing symptoms such as adolescent conduct disorder (CD) and opposition defiant disorder (ODD; Roosa et al., 2012), psychosocial (Alva & de Los Reyes, 1999) and acculturative stress (Santiago et al., 2014), depression (Basáñez, Warren, Crano, & Unger, 2014), and fatalism (Basáñez et al., 2014; Guzmán et al., 2005), or “the extent to which people feel their destinies are out of their control” (Guzmán et al., 2005, p. 6), while self-esteem has been shown to positively affect Latina/o student grades (Jiang, Yau, Bonner, & Chiang, 2011). In addition, loneliness has been negatively related to test scores (Benner, 2011), feeling bullied has been found to negatively correspond with attendance (G. Espinoza, 2015), and socioemotional competence has been negatively related to student discipline issues (Prelew & Loukas, 2003).

School/institutional variables. Finally, several school/institutional variables have been found to be related to Latina/o student achievement. Among the most-researched of these factors are the racial composition of the student body, racial segregation and stratification within school courses, and school SES. By and large, research has shown that attending schools with predominantly Latina/o or minority populations has negative consequences for Latina/o students’ grades (Crosnoe, 2005; Ryabov & Van Hook, 2007), test scores (e.g., Lleras & Rangel, 2009), and high school completion (Riegle-Crumb & Callahan, 2009; Zarate & Pineda, 2014). In addition, when Latina/o students attend schools where academic courses are racially segregated

or stratified, students have been found to be negatively affected in terms of their grades (Muller, Riegle-Crumb, Schiller, Wilkinson, & Frank, 2010) and test scores (e.g., Berends & Peñaloza, 2010).

The body of research examining the socioeconomic composition of schools and Latina/o academic achievement universally indicates that higher school SES is associated with higher achievement in relation to nearly all forms of achievement (e.g., Goza & Ryabov, 2009; Kalogrides, 2009; Mosqueda & Maldonado, 2013; Ryabov & Van Hook, 2007; Song & Elliott, 2012). For instance, Ryabov and Van Hook (2007) analyzed data from the National Longitudinal Study of Adolescent Health (Add Health) and found that school SES was a strong predictor of both GPA and test scores among Latina/o students, and Kalogrides (2009) used ELS:2002 to show that students attending schools with fewer poor students had higher reading and mathematics test scores.

Discussion

This synthesis of empirical research enhances prior work examining the factors related to Latina/o academic achievement in K-12 schools by assembling the results of this body of literature in one place in order to assist researchers and educators to locate the information they need to facilitate academic success for Latina/o students in schools. The current review also identified several methodological trends in the research on Latina/o academic achievement. For example, the majority of the work reviewed for this study relied on quantitative methods and the use of national longitudinal data sets in secondary schools (mainly high schools). While such work is no doubt important, it underscores the lack of qualitative work in the area, as well as work conducted in elementary schools. For instance, results of this synthesis suggest that students' prior academic achievement plays an important role in their later academic success;

however, only a small percentage (17%) of the reviewed research has taken place in elementary schools. There remain, therefore, substantial gaps in our knowledge regarding what is being done in elementary schools to improve students' academic achievement in secondary schools, which would in turn increase their access to postsecondary education. Furthermore, considering the findings of multiple studies showing that home and family support is crucial to the academic achievement of Latina/o students, it is imperative that more qualitative work is conducted in order to understand how schools involve parents and other caregivers in their children's academic successes. Although the scholarship to date has identified a number of school and community programs that influence students' academic achievement, it remains unclear how these programs are involving families in their work. Qualitative work centered on this topic would contribute greatly to our understanding of family inputs that influence student achievement.

Moreover, this review found that approximately one third of all studies on K-12 Latina/o student achievement analyzed data from one of four national data sets. While research that employs national data sets may be largely generalizable to Latina/o students across the United States, some limitations must be considered when examining the usefulness of their results. For example, data collection for these studies may not precisely reflect the experiences of Latina/o students, as they were developed for all students rather than just Latinas/os. This may require scholars "to rely on ethnocentric definitions of variables" (Crisp, Taggart, & Nora, 2015, p. 262) rather than on variables that may be more applicable across race/ethnicity.

The analysis of the research reviewed in this study revealed several other noteworthy findings. For example, results suggest that Latina/o students' academic achievement is directly influenced by their experiences in school, including inter- and intra-school segregation,

experiences with school faculty and staff, and prior academic achievement. Given the findings from this review that reveal attending schools with predominantly Latina/o populations has negative consequences for Latina/o students' academic achievement, it is necessary to expand the work of scholars who have described such schools as lacking the resources enjoyed by predominantly White schools, including a lack of adequate facilities (Jimenez-Castellanos, 2010) and noncertified or emergency-credentialed teachers (Jimenez-Castellanos, 2010; Valencia, 2000) who do not belong to the same racial/ethnic groups of their students (Duncan-Andrade, 2005), to what impact such lack of resources may have on actual achievement outcomes. Apart from interschool segregation, results of this review show that intraschool segregation, in particular the tracking of Latina/o students into low-level courses, contributes to their low achievement outcomes. Future research, then, should investigate how schools with high rates of Latina/o students in upper level courses are promoting rigorous course-taking for these students.

In addition, present results reveal that Latina/o students' experiences with school faculty and staff contribute to their academic achievement through culturally specific teaching practices and positive relationships. Although the promotion of culturally relevant pedagogy has been endorsed by many scholars as a tactic to combat existing inequities and discriminatory practices in the schooling process for diverse groups of students (e.g., Ladson-Billings, 2009), the bulk of the literature on culturally congruent instructional practices has been limited to descriptions of culturally relevant environments and methods (e.g., Enyedy & Mukhopadhyay, 2007; Hall & Damico, 2007; Leonard, Napp, & Adeleke, 2009; Moses & Cobb, 2001; Wortham & Contreras, 2002), problems associated with the implementation of culturally relevant pedagogy (e.g., DeJaeghere & Zhang, 2008; Jennings & Smith, 2002), characteristics of culturally responsible teachers (e.g., Garza, 2009; Hermes, 2005; Hughes, 2003; Lewis & Kim, 2008; Van Horn,

2000), and the effects of culturally relevant pedagogy on student engagement (Gutstein, 2003; Noguera, 2001), but has rarely focused on the impact of components of culturally relevant pedagogy on student academic achievement outcomes, and those that do consist mainly of small-scale case studies (Sleeter, 2010). Furthermore, research that has examined culturally relevant pedagogy has focused largely on elementary school-age African American students (e.g., Boykin & Bailey, 2000; Boykin & Cunningham, 2001; Boykin, Lilja, & Tyler, 2004; Komarraju & Cokely, 2008) but has largely ignored the effects of culturally relevant pedagogy for Latina/o students. In addition, with few exceptions (e.g., Sheets, 1995), published studies generally have not directly investigated the relationship between culturally relevant pedagogy and the academic achievement of racial/ethnic minority youth (Sleeter, 2010). Because of the myriad difficulties faced by Latinas/os in the American educational system, research examining the effects of culturally relevant pedagogy on Latina/o academic achievement is necessary to improve the educational outcomes for this large and ever-growing group of K-12 students.

Finally, findings of the present review highlight the need for educators to help build social capital among Latina/o students, especially for first-generation college-going students regarding access to postsecondary education. However, it is unclear how school faculty provide their students with information and experiences that lead to their high school completion and college enrollment, including guidance on course-taking pathways in high school, college admissions information, and resources regarding financial aid for students who want to attend college, which would also help to counteract the low college enrollment rates for students from low-SES backgrounds attending low-SES schools, as emphasized in the research synthesis.

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